

Attorney Docket No. 856.1043

**THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re ~~the~~ Application of:

Tomasz DUCZMAL, et al.

Serial No. 09/535,979

Group Art Unit: 2174

Confirmation No. 4057

Filed: March 27, 2000

Examiner: Nguyen, Nhon D.

For: METHOD AND SYSTEM FOR DYNAMIC DISPLAY OF MARKETING CAMPAIGNS ON  
DISPLAY LOCATION VIA A NETWORK

**DECLARATION UNDER 37 CFR SECTION 1.131**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

We, Tomasz Duczmal and David M. Roscoe, are the co-inventors of the above-identified application and hereby declare:

1. Prior to December 7, 1999 we conceived of and began working on a patent application for the invention described and claimed in the above-identified application.
2. On or about December 7, 1999 a patent application was ready for filing in Canada.
3. On or about December 7, 1999 we prepared and signed a letter (see Exhibit A) addressed to The Commissioner of Patents of Canada for filing the application noted above in Canada. On or about December 7, 1999, one of us, signed a check (see Exhibit B) made payable to the Commissioner of Patents to cover the filing fee for filing the application noted above of in Canada.
4. On or about December 15, 1999 the application, the letter of Exhibit A and the check of Exhibit B were sent to The Commissioner of Patents of Canada via courier (see Exhibit C).
5. On or about December 17, 1999 the application noted above was given a filing date of December 17, 1999 and assigned Canadian patent application number 2,293,556 (see Exhibit D).

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6. On or about March 27, 2000, the above identified U. S. patent application was filed and claimed priority to Canadian patent application number 2,293,556 noted above.

We hereby declare that all statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the above-identified application or any patent issuing thereon.

Date: \_\_\_\_\_

By: \_\_\_\_\_  
Tomasz Duczmal

Date: \_\_\_\_\_

By: \_\_\_\_\_  
David M. Roscoe

Tomasz Duczmal  
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David M. Roscoe  
233 Linwood Cres., Burlington, Ont.  
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Dec 7, 1999

The Commissioner of Patents,  
Ottawa-Hull,  
Canada K1A 0E1

Dear Sir:

Enclosed is an application for patent in the name of Tomasz Duczmal and David M. Roscoe entitled: "Apparatus and method of generating a dynamic image on billboards and poster displays" which is comprised of the following:

- ( ) 1. Abstract
- (X) 2. Description
- ( ) 3. Claims
- (X) 4. Petition
- ( ) 5. Claim to Convention priority
- (X) 6. Informal drawings
- (X) 7. Cheque in the amount indicated below to be applied as follows:

Basic fee \$150.00

TOTAL \$150.00

If payment of the examination fee is tendered herewith, applicants then requests examination of this application.

Sincerely yours



Tom Duczmal, Ph.D.



David M. Roscoe

EXHIBIT B

TOMASZ DUCZMAL  
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Dec 7, 1999

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DAVID M. ROSCOE  
Company Name/Nom de la société

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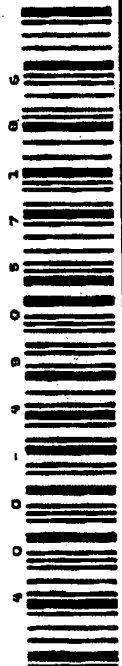
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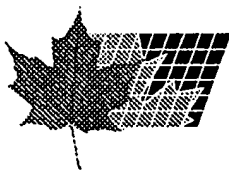
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(12) (19) (CA) **Demande-Application**

(21) (A1) **2,293,556**

(22) 1999/12/17

(43) 2001/06/17

(72) DUCZMAL, TOMASZ, CA

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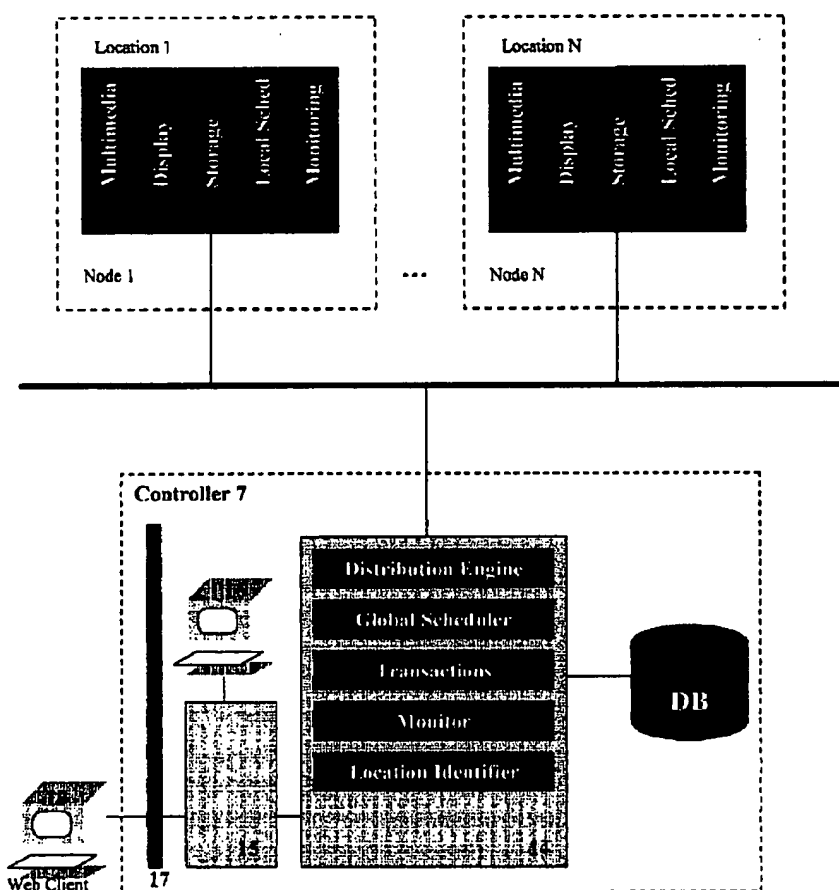
(71) ROSCOE, DAVID M., CA

(51) Int. Cl. <sup>7</sup> G09F 9/00

(54) **APPAREIL ET METHODE DE PRODUCTION D'IMAGES  
DYNAMIQUES SUR LES PANNEAUX D'AFFICHAGE ET LES  
AFFICHES**

(54) **APPARATUS AND METHOD OF GENERATING A DYNAMIC  
IMAGE ON BILLBOARDS AND POSTER DISPLAYS**

Software block diagram.



## **Apparatus and method of generating a dynamic image on billboards and poster displays.**

Inventor: Tomasz Duczmal, David M. Roscoe

Oakville, Nov 6, 1999

### **Field of invention**

This invention relates to a method and apparatus for generating dynamic message to be displayed on billboards and posters. More particularly, the method uses computer software and hardware to store, distribute and schedule the display of multimedia promotional material on billboards and posters. Current billboards use static information, usually in form of a printed image/picture and text. This media is replaced by dynamic information utilizing multimedia technology. A billboard site is converted to a node on a computer network. The central location of this network, stores the images and multimedia material in a database. The controller uploads these images to a specific location to be displayed by the node. The scheduler and database are accessed via an Internet web site to manage requests and process transactions.

### **Background of the invention**

In today's economy advertising and promotions play a significant role in marketing campaigns. One of the means to deliver promotional messages is the use of billboards and posters located in public places. This requires a long and inefficient process, involving graphic designers, printing houses, advertising agencies and billboard owners. The effectiveness of these marketing tools i.e. billboards/posters heavily depends on the timing, graphical form and attractiveness of the message presented. There are several disadvantages of this form of media:

1. The display is static where one site is occupied by the same material for a long duration of time.
2. The content displayed on the billboards and posters is difficult to change – logistics of putting new content is complicated involving several parties which raise the cost and extend the time from conception to actually displaying poster. (i.e. a new printed poster to be installed over the old one)
3. There is no means for quick response to market fluctuations on particular campaigns by updating content of the billboards/posters.
4. One location can be only used by only one client.

Therefore, an important addition to the art would occur if a method and apparatus is developed to effectively deliver a dynamic message, and display content in real time.

## Brief description of the drawings

Fig. 1 Hardware block diagram of the system.

Fig. 2 Software block diagram of the system.

## Detailed description of preferred embodiments

As readers skilled in the art will recognize, this invention has a wide range of applications. The following example of billboards is for illustrative purposes only, and does not suggest that the invention is restricted to this application. Details of the hardware and software may vary; however, the essence of the invention and the underlying methodology remains constant: replacing a static image on the billboard by delivering and displaying a dynamic, multimedia information tailored to marketing strategy using the internet as a delivery model.

## System description

A preferred embodiment is illustrated on Fig. 1, and is comprised of a multiplicity of billboards (1) at Locations. Billboard is a space to display promotional material and uses a Display device (2), which is connected to a Node (3). Display devices are industry standard computer video displays and can be in the form of LCD panels, LED panel, projector device utilizing Digital Light Processing unit or CRT. Node (3) enables communication with Controller (4) and displays the digital material stored locally in the Node memory. The content and timing of displayed material is exclusively managed by communication with Controller (4). Controller (4) is connected to the Internet, enabling access to the content being displayed on many billboards by many Users. (5).

Fig. 2 represents the software configuration to deliver desired functionality. A Node at the Location is a diskless station, bootable from network with operating system (6), software running applications for multimedia, display, local scheduler/timer, storage, network connections and monitoring display content via central controller.

On the Controller (7) site, eight major applications enable desire functionality. Distribution Engine (8) uploads advertising material and timing information to a Node site and monitors the status of a Node. Global Scheduler (9) maintains and tracks available time slots on all nodes. It is the main source of information to determine where and when time slots for display are available. Transaction System (10) enables payments, cancellations, and status tracking. Monitoring System (11) allows the real time view of the content displayed on a specific billboard site. Users can check if the contracted material is displayed at the contracted time and see what material is displayed before and after. Location Identifier (12) is a reporting tool which allows the user to search database for description, statistics and technical information on the site. It utilizes a Geographic Information System. All applications use data stored in the Central Data Warehouse (13). Applications engines (14) are accessed through Web Server (15) by either Administrator (16) or through Firewall (17) by Web Client (18).

**Method description**

An advertiser creates digital image and/or multimedia material promoting clients' goods or service. When content approval process is concluded, advertiser logs in to the system via web browser. His identity is verified by checking password. Once logged in he will search the locations and available time slots on billboards or posters belonging to the system. He accesses demographic, technical, pricing and statistic data describing a Location through the Location Identifier. He picks locations and time slots, which suits his marketing campaign. A Transaction System sends quotation in real time. Client can accept offer and Transaction System completes contract. It transfers funds, reserves time slot using Global Scheduler and prompts client to upload his material. Client uploads his material to Data Warehouse. Distribution Engine checks uploaded material for technical integrity and prompts Administrator to check material for content integrity. When material is reviewed and approved by Administrator, Distribution Engine uploads file and timing information to desired Node. At the Node site, the Local Scheduler triggers the Multimedia software to run desired package from a local Storage. A Local Monitor tracks ID of files actually being displayed and sends this information to the Monitoring System of the Controller in real time.

An owner of the advertising material (User) can log in with a different set of privileges. Using the Monitoring System they can see what is displayed on the Node that is contracted. On the Users's request, the Monitoring system can retrieve from the Central Data Warehouse the file being displayed on the specific site and send it to the User's browser. This gives him a feedback about the context in which his material is being promoted.

Fig 1. Hardware block diagram

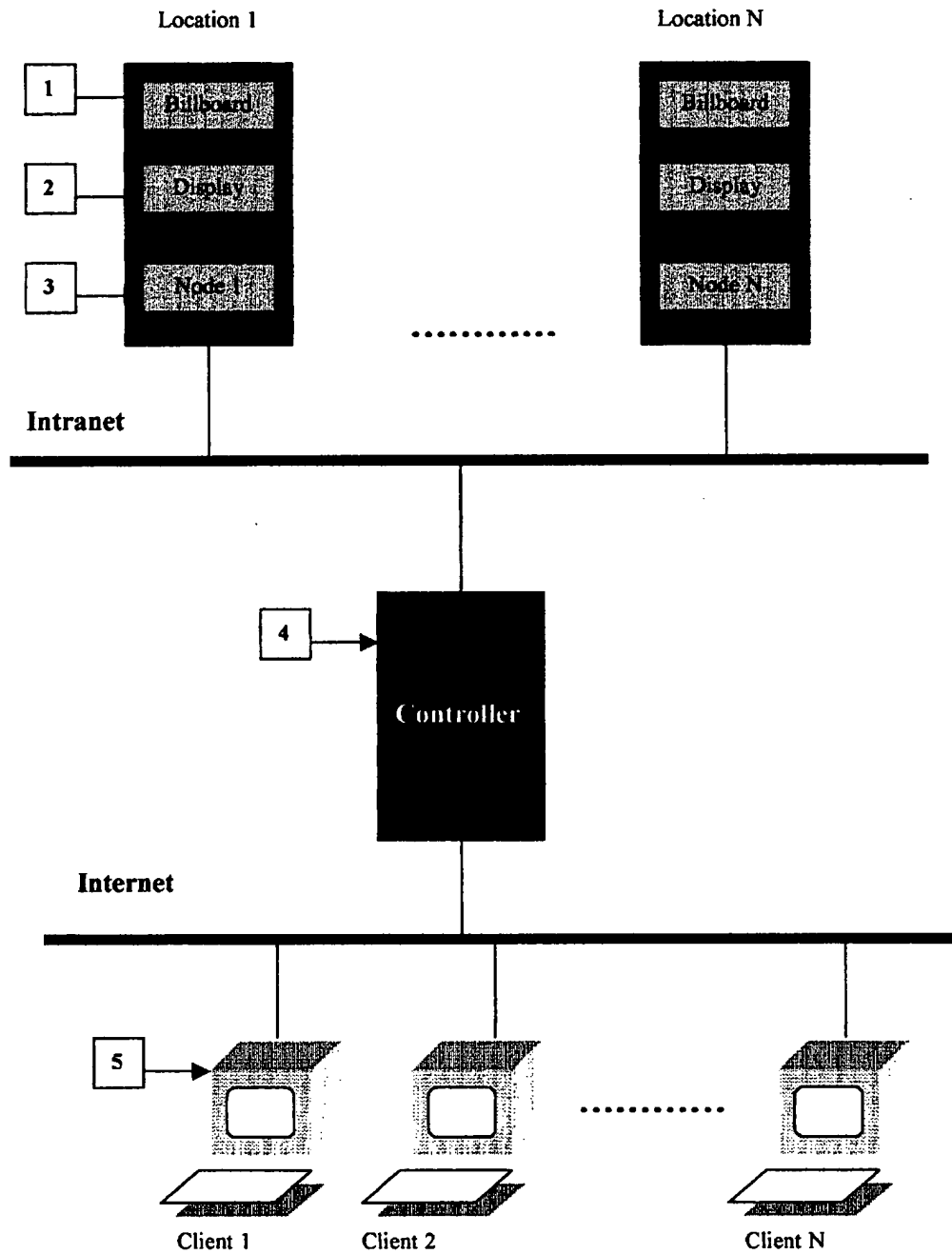
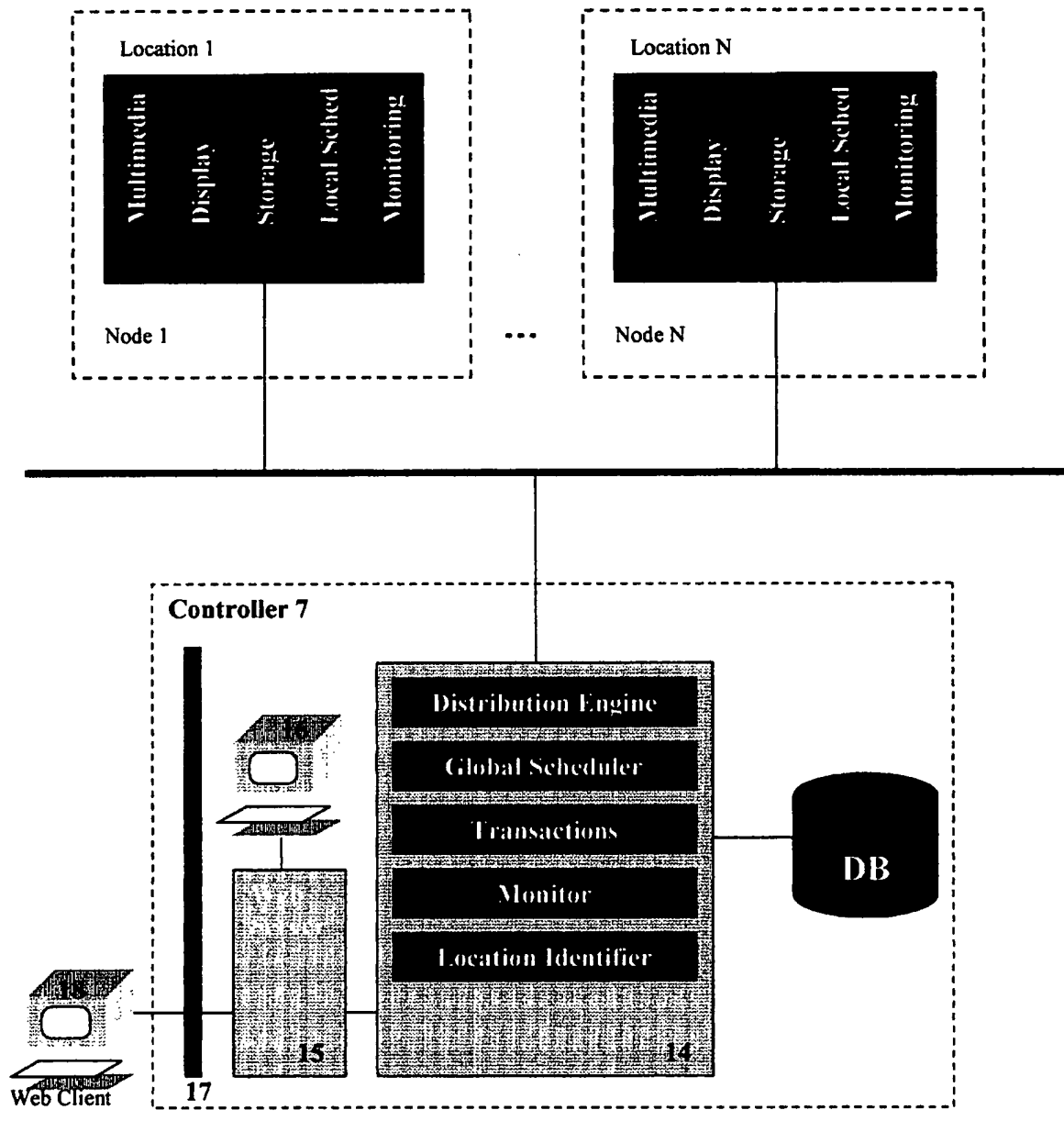


Fig 2. Software block diagram.



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